

favourably with most of the coast races, namely, their lighter colour—generally a warm chocolate—and their freedom from that offensive smell which is supposed, wrongly, to characterise most Africans" (p. 397).

In this instructive passage all the facts are stated with tolerable accuracy. Yet the general inference cannot be accepted. There is, strictly speaking, no Bantu type at all, and the expression, correct in a linguistic sense, has no definite anthropological meaning. But for the fact that most of the peoples occupying the southern half of the continent speak dialects of a common mother-tongue, no ethnologist would ever have thought of grouping them together as forming a separate branch of mankind. Physically they must be regarded as distinctly Negroid, that is, an essentially mixed race presenting every possible shade of transition from the true Negro of Sudan and the West Coast to the true Hamite of the north-east coast. Between these two extremes they oscillate in endless variety, presenting nowhere any stable type distinct from either, and bound together only by the single element of their common Bantu speech. On the other hand, this Bantu speech itself is not Hamitic, but Negro, as clearly shown by the absence of grammatical gender. There appears to be also present a more or less distinct substratum of Negro blood in all the Bantu-speaking tribes, from the Mpongwés of the Gaboon to the Ama-Khosas of the extreme south-east, and from the Wa-Swahili on the East to the Ba-Congo on the West Coast. Hence these peoples should apparently be regarded rather as Negroes affected by Hamitic than as Hamites affected by Negro elements. In other words they are Negroid rather than Hamitoid.

The spread of a single organic speech of an extremely delicate structure over such a vast area, unaided by the prestige of letters, or by far-reaching political influences, is certainly a surprising phenomenon. But it is not without its analogues in other quarters of the globe, where we find an equal and even wider diffusion, for instance, of the Malayo-Polynesian, Ural-Altaic, Aryan, Athabascan, and Guarani-Tupi forms of speech, also before the rise of literatures and great empires. And as no sound anthropologist regards the Aryan or the Malayo-Polynesian-speaking peoples as belonging to one physical type, neither can they regard the Bantu-speaking tribes as constituting a single ethnical group. All these terms, Aryan, Malayo-Polynesian, Bantu, are essentially linguistic, and as such have a definite meaning. Ethnologically they have little or no scientific value. It is noteworthy that, when not advocating theories, Mr. Johnston himself speaks of the Bantus of the Congo Basin as Negroes. Thus at p. 298, where he contrasts them unfavourably with the half-caste Wa-Swahili of Zanzibar, he writes:—"The mixture of Arab blood and Arab culture gives a stability and manliness to the Wa-Swahili which is lacking even in the finest race of pure Negro origin. The Congo peoples, for instance, are usually amiable and soft-mannered, but at heart they are seldom to be depended on. There is something so eminently childish in the Negro's character. . . . All these traits are found in the black races of Africa that are of purely Negro or Bantu stock; but in the Semiticised people of Zanzibar you find men of thought and reflection, whom you may use as counsellors and confidants; men who are really capable of zealous service, of disinterested affection, and to whom gratitude is a concept neither foreign to their intelligence nor their tongue." This is true and well put, and is the common experience of all travellers who have had dealings with the natives of South Central Africa. It shows at the same time that "even the finest" Bantu peoples must ultimately be affiliated to the Negro stock.

Besides the numerous illustrations, two useful maps and a copious index, this handsome volume is furnished with comparative linguistic tables of the chief Bantu

languages current in the Congo basin, as well as full lists of the plants, birds, and mammals occurring in the same region.

A. H. KEANE

NOTES

EUROPEAN science has sustained a terrible loss during the past week. Monsieur Dumas, the venerable Perpetual Secretary of the French Academy of Sciences, died at Cannes on the 11th inst. at exactly the age of the century. Old as the great chemist was, his death will be felt as a real and serious loss to French science, for up to the last he took an active interest in all its doings. We gave in vol. xxi. so full a biography from the masterly pen of Prof. Hofmann of Berlin, that it is unnecessary to go over the ground again. We may, however, attempt in a future number to appreciate to some extent the position of Dumas in the chemistry of the past sixty years. The funeral took place at Mont Parnasse Cemetery on Tuesday, when MM. Bertrand, D'Haussonville, and others delivered addresses at the grave. The sitting of the French Academy of Sciences on Monday was postponed after the reading of an address by M. Rolland, the president, who praised M. Dumas for the talent and impartiality he exhibited as Perpetual Secretary of the Academy.

THE Museums of Economic Botany at Kew are second in importance to none in the world, and, except perhaps as to the size and splendour of the buildings, they are in every way worthy of a nation which has trade relations with every part of the globe. The foundation of these museums was laid by Sir W. J. Hooker in 1847, when he obtained leave to fit up an old fruit store with cases suitable for the exhibition of important vegetable products. Ten years later the house now known as Museum No. 1 was opened to the public, and in 1881 this was added to and the approaches greatly improved. It will be remembered that these buildings were not originally designed for museum purposes, and yet such is the arrangement of the cases and so well are the objects displayed and illuminated that we know of no museum built for the purpose that we would prefer to No. 1 Museum at Kew. The collections are contained in Museum No. 1, which is directly opposite the Palm House, on the other side of the Ornamental Water, in Museum No. 2, which is close to No. 1, at the northern end of the Herbaceous Garden, while Museum No. 3 occupies the old Orangery. At the north end of the Broad Walk the last Museum contains specimens of large timber, while the monocotyledons and flowerless plants are arranged in No. 2, and the dicotyledons in No. 1 Museum. An official guide to the contents of the latter Museum has just been published. As nearly every object exhibited is fully labelled, this guide-book does not enumerate a tithe of these, but a certain number of important objects are marked with a conspicuous number, and these numbers are referred to in the catalogue. In the 130 pages of this guide there is compressed a vast amount of information, a great deal of which is easily understood, even apart from the interesting collection on which it is founded; and if the student, as he walks through the Gardens, is struck at the beauty of the vegetable kingdom, he will, as he studies the products of that kingdom within these museum walls, be more struck at the extreme indebtedness of mankind to this kingdom for the necessities and luxuries of life.

WE regret to learn that Sir Sidney Smith Saunders, C.M.G., for many years British Consul in various Mediterranean ports, and a distinguished entomologist, died suddenly on Tuesday evening (15th) at an advanced age. He was one of the original members of the Entomological Society of London, and was a vice-president of the Society at the time of his death. He devoted special attention to the singular bee-parasites known as *Stylopidae*.

THE following are the arrangements for the lectures at the Royal Institution after Easter:—Dr. Klein, two lectures on the Anatomy of Nerve and Muscle, on Tuesdays, April 22 and 29; Prof. Gamgee, five lectures on the Physiology of Nerve and Muscle, on Tuesdays, May 6 to June 3; Prof. Dewar, seven lectures on Flame and Oxidation, on Thursdays, April 24 to June 5; Mr. Hodder M. Westropp, three lectures on Recent Discoveries in Roman Archæology, on Saturdays, April 26 to May 10; and Prof. T. G. Bonney, four lectures on the Bearing of Microscopical Research upon some Large Geological Problems, on Saturdays, May 17 to June 7. The following is a list of the Friday evening lectures:—April 25, the Art of Fiction, by Walter Besant; May 2, Krakatoa, by Prof. Judd; May 9, Mohammedan Mahdis, by Prof. Robertson Smith; May 16, the Dissolved Oxygen of Water, by Prof. W. Odling; May 23, Sidereal Astronomy, by Dr. David Gill; May 30, Sur les Couleurs (in French), by Prof. E. Mascart; June 6, Prof. Dewar.

BESIDES subjects of general anthropological interest, the following specially American topics, as to several of which Canada affords important evidence, are suggested for papers to be read in the Anthropological Section at the Montreal meeting of the British Association. The papers on each subject will, as far as possible, be grouped for reading on the same day, so as to insure a general discussion. (1) The native races of America: their physical characters and origin; (2) Civilisation of America before the time of Columbus, with particular reference to earlier intercourse with the Old World; (3) Archæology of North America, ancient mounds and earth-works, cliff-dwellings and village-houses, stone architecture of Mexico and Central America, &c.; (4) Native languages of America; (5) European colonisation and its effects on the native tribes of America. It is requested that all papers may be sent to the office of the Association, 22, Albemarle Street, London, W., on or before July 1.

THE International Ornithological Congress at Vienna was brought to a conclusion on Friday last by an appropriate speech from its patron, the Crown Prince Rudolph, who, among other things, warmly thanked the scientific men from abroad for their appearance in Vienna. The next Congress will not take place till three years hence, and will be held in Switzerland. The Crown Prince has accepted the honorary office of Patron of the Permanent International Committee for the Establishment of Ornithological Observatories, or stations for the observation of the habits of birds, especially those of the migratory species. Prof. Blasius, the president of the third section, to whose sphere the subject belongs, explained the nature, object, and importance of such ornithological stations of observation. M. Rodde proposed that the meteorological stations should be used as ornithological ones. Dr. Schier of Prague afterwards gave an account of his efforts to secure a regular system of observation. He had received from some hundreds of correspondents many valuable notices in regard to the line of passage of migratory birds.

THE Academy of the Lincei have elected Prof. Francesco Brioschi, a senator, to fill their presidential chair recently left vacant by the death of Signor Quintino Sella, electing at the same time Commendatore Fiorelli, who so long directed the excavations at Pompeii, to fill the office of vice-president. The new president, Signor Brioschi, is a distinguished mathematician.

AN interesting little volume appears this week in Edinburgh containing an annotated list of the illustrious dead who have been in any way connected with Edinburgh University. The names are classified according to the departments with which they are connected, "Zoologists and Botanists," for example, beginning with Erasmus Darwin and ending with Charles Darwin. The brief

notes attached to the names have, we believe, been compiled by various specialists.

THE Anthropological Institute will hold its first meeting in its new premises, No. 3, Hanover Square, on the 22nd instant.

THE next Ordinary General Meeting of the Institution of Mechanical Engineers will be held on Thursday, May 1, and Friday, May 2, at 15, Great George Street, Westminster. The Chair will be taken by the President, Mr. I. Lowthian Bell, F.R.S., at half-past seven p.m. on each evening. The following papers will be read and discussed as far as time will admit:—On Thursday, May 1, on the consumption of fuel in locomotives, by M. Georges Marié, of Paris; on portable railways, by M. Paul Decauville, of Petit-Bourg, Paris; on the Moscrop engine recorder, and the Knowles supplementary governor, by Mr. Michael Longridge, of Manchester. On Friday, May 2, description of the automatic and exhaust-steam injector, by Mr. A. Slater Savill, of Manchester; description of the apparatus used for testing current-meters, at the Admiralty Works at Torquay for experimenting on models of ships, by Mr. Robert Gordon, of Burmah; description of the Francke "Tina" or vat process for the amalgamation of silver ores, by Mr. Edgar P. Rathbone, of London.

THE Report of the U.S. Solar Eclipse Expedition, *Science* states, has just been ordered to be printed by Congress. Among its contents are:—Meteorology of Caroline Island, by Mr Winslow Upton. Botany of Caroline Island, collections by Dr. W. S. Dixon, U.S.N., and identifications by Prof. W. Trelease; Notes on the zoology of Caroline Island, by Dr. W. S. Dixon, U.S.N.; Memorandum on the butterflies, &c., of Caroline Island, collections by Dr. J. Palisa, identifications by Messrs. Herman Strecker and Arthur G. Butler; Chemical constituents of the sea-water of the lagoon of Caroline Island, determined by Messrs. Stillwell and Gladding; Observations of twenty-three new double stars, by Prof. E. S. Holden and Prof. C. S. Hastings; Plans for work on the day of the eclipse, by Prof. E. S. Holden.

FROM *Science* we learn that at the request of the Navy Department, the Fish Commission steamer *Albatross*, Capt. Tanner commanding, was fitted out during the winter for the purpose of carrying on a series of deep-sea soundings and dredgings in the Caribbean Sea, a region very little known in respect to its depths. The vessel left Washington on January 1, and reached St. Thomas on the 17th, and, after coaling, proceeded on her voyage, making the following ports:—Curaçoa, Trinidad, the Island of Oruba, Alta Vela, Jacmel, Gonaives, Santiago de Cuba, Navassa, and Kingston (Jamaica), where she arrived March 1. She left Kingston March 11, and arrived at Aspinwall, *viâ* Savanilla, March 25. On her return from Aspinwall she will proceed *viâ* Cape San Antonio to Key West, expecting to arrive at the Washington navy-yard about the middle of May. The expedition has been a great success in all respects, numerous satisfactory series of soundings and temperatures having been taken, and large numbers of marine animals obtained. In the collections incidentally obtained during the stay of the steamer at Trinidad were two specimens of the guacharo bird, *Steatornis caripensis*, which is such a rarity in museums, and two of the great fishing-bat.

ON Easter Monday the Essex Field Club held a meeting at Saffron Walden, about sixty members and visitors being present. Alighting at Audley End Station, the party drove to Lord Braybrooke's mansion, where they had an opportunity of inspecting the fine collection of birds and prehistoric and Roman antiquities contained in the museum. The Club was then conducted to a neighbouring hill, known as Ring Hill, where an ancient circular entrenchment is to be seen, and from there proceeded to a wood

known as Peverels, where the true oxlip (*Primula elatior*) grows in profusion, the ground being in parts carpeted with the flowers of this interesting species. After luncheon a visit was paid to Mr. Joshua Clarke, F.L.S., at his residence, Fairycroft, and the visitors viewed the magnificent collection of humming-birds and birds of Paradise formed by this gentleman. The Club next assembled in the grounds of Mrs. Gibson, and inspected the site of the ancient Saxon cemetery and the collection of skulls and relics found therein during the excavations undertaken by the late Mr. G. S. Gibson, a full description of which has been published in a recent number of the *Transactions of the Essex Archaeological Society*. The splendid library of scientific and other works belonging to the late Mr. Gibson having been hastily viewed, and the party having partaken of the hospitality offered by Mrs. Gibson, they were next conducted to the Saffron Walden Museum, where the various collections were greatly admired, and the curator, Mr. Maynard, much complimented upon the ability and zeal which he had displayed in their organisation and arrangement. In the ruins of the ancient castle adjoining the Museum Mr. Maynard read a paper on the history of these remains, and the party then proceeded to view the church, under the guidance of the Rev. Mr. Stevens. After tea an ordinary meeting of the Club was held, the president, Prof. Boulger, being in the chair. A paper, on the cultivation of the saffron in connection with the old town of Saffron Walden, was read by Mr. Joseph Clarke. With the object of promoting the extension of natural history science throughout the county, the Club proposes to establish local centres in the chief towns of Essex, and arrangements will shortly be made to commence operations at Saffron Walden, where so much interest was shown in the visit of the Club.

ON Saturday next, April 19, at three o'clock, a meeting of the Essex Field Club will be held at the British Museum of Natural History, South Kensington, under the direction of Dr. Henry Woodward, F.R.S. Dr. Woodward will deliver an address in the lecture-room on "Wingless Birds," and afterwards give a demonstration of the species, extinct and recent, in the geological and zoological galleries.

THE Council of the Linnean Society of New South Wales have been presented by a member of the Society with 100*l.*, accompanied with a request that it should be offered as a prize for an essay on "The Life History of the *Bacillus* of Typhoid Fever." The Council has assented to the proposal, and advertisements to that effect will be immediately inserted in the most prominent scientific publications throughout the world. The essay will be received by the Society not later than December 31, 1884. The intention and wishes of the donor of the prize will be best given in his own words. "The questions chiefly to be solved in the investigation of the life history of the *Bacillus* of typhoid fever, are—1. What are the specific characters of the organism, as distinguished from other *Bacteria*? 2. What are the changes, if any, which the organism undergoes in the human body? 3. What are its modes of development and reproduction in the human body? 4. What changes or metamorphoses, if any, does the organism undergo after ejection from the human body, or in any other condition of its existence? 5. What fluids or other substances seem best adapted for the growth and multiplication of the organism? 6. Can the organism live or be cultivated in pure or distilled water? 7. What are its limits of endurance of heat, cold, dryness, or humidity? As far as these points are concerned the author should confine himself entirely to facts which come under his own observation, and those should be given in detail, with a full explanation of the method of investigation. But in dealing with the results obtained by these investigations, and the consideration of the means whereby a knowledge of the life history of this most dangerous organism may help towards its eradication, the theories and observations

of others may appropriately be referred to, but in every such case the authority must be correctly cited. The chief points to be ascertained in this branch of the subject are—1. How, and under what conditions, does the organism get access to the human body? 2. How can its growth be impeded, or its vitality destroyed in the human body without serious injury to the individual affected? 3. How can it be eradicated or rendered innocuous in wells, water-holes, drains, &c."

AMONG the superabundant "Universities" of the United States Harvard is unquestionably taking its place as a national institution on a par with British establishments which hold a similar designation. The last quarterly *Bulletin* of its proceedings is before us, which has to acknowledge during that short time nine legacies or donations in money, varying from 200 to 100,000 dollars, and amounting to 168,000 dollars. One of these is 10,000 dollars subscribed for the purchase of meteorites, and another is 2000 dollars from the Massachusetts Society for Promoting Agriculture, to assist in the establishment of a veterinary hospital, to which institution also a collection of pathological models is presented. Other donations are, a new building for the law schools, two portraits of eminent divines, and the anatomical collection of a doctor who had previously founded a museum there. The *Bulletin* is edited by the well-known Harvard librarian, Mr. Justin Winsor, and a very carefully printed catalogue of the chief accessions to the University library in English, French, German, Italian, Spanish, Danish, Russian, Polish, and Hindustani, forms the bulk of it. Many of these additions are treasures which few libraries can acquire possession of, a few only of which have been printed, chiefly for private circulation, others, nevertheless, being both important and familiar books published a year or two ago. The books are divided into ten subjects, and it shows how different technical experience sometimes is from theoretical ideas, when so experienced a librarian finds it convenient to class together "History and Geography," while "Antiquities" are under a separate heading. We doubt, however, whether Izaak Walton or any one else would have looked for "The American Angler's Guide; or the Complete Fisher's Manual for the United States," under the head of "Law and Sociology," even if "Caxton's Game and Play of the Chesse" may in some sense belong to the latter. The advantages possessed by the librarian of such an institution as this are being fully utilised by Mr. Justin Winsor who is issuing in each number of the *Bulletin* most carefully written results of his researches into the bibliography of various subjects—in this January number, of "Ptolemy's Geography" and "The Kohl Collection of Early Maps," specially noting the gradual and irregular spread of the knowledge of America.

A STALACTITE cavern was recently discovered by accident near Cerdon in the Ain Department (France). It is situated near the old high road connecting Lyons with Geneva. Some country people who ventured into it state that it extends about 300 metres underground, and that its height varies considerably. Lyons and Geneva naturalists are now making a more minute investigation of the cave.

A STRONG shock of earthquake was felt at Urbino at a few minutes before 8 a.m. on the 9th inst. Its duration was five seconds. A shock was also felt at Belpasso, near Catania, at 10 a.m. on the 10th. It occasioned no damage.

OWING to the frequent earthquakes that have recently occurred in Slavonia, Prof. Pillar has been sent to observe these occurrences by the Hungarian Government, and will shortly present a detailed report to the Government on the subject.

ACCORDING to Herr Jæger of Rinde, on the Sogne Fjord, who, since 1858, has noted the number of earthquake shocks that have been felt in the district, there have been appreciable shocks from that period till 1879. Since the latter year no shock

has been felt. It is worthy of record that on two occasions, viz. in 1860 and 1865, the shocks were perceived on the south side of the fjord, the districts on the northern coast being wholly undisturbed.

THE last number of the *Transactions of the Seismological Society of Japan* (Yokohama, 1884) contains various papers on seismology. The first is by Prof. Milne, on earth pulsations; the next is by Mr. Alexander, on the interpretation of a diagram described by a particular form of earthquake instrument. The object of the writer is to calculate not only the maximum velocity, but also the maximum rate at which the velocity changes, "which is a measure of the effect which an earthquake exerts in overturning and fracturing bodies placed on the earth's surface." Prof. Ewing describes the construction of a pendulum which shall be without a tendency to swing when the point from which it is suspended suffers displacement. Mr. Gergens gives a note on ripple-like marks found on the surface of an iron casting supposed to have been shaken while solidifying, which marks are picturesquely described as "a note in a congealed earthquake." The remainder of the volume is occupied by suggestions for new types of seismographs, a list of earthquakes in Tokio, and a report on systematic earthquake observations.

A CORRESPONDENT in *Nature* has drawn attention to the great differences of climate observable last winter between Christiania and Stavanger. While in the former place there was a depth of from ten to twelve inches of ice during the month of January, vegetation had never been wholly arrested in the latter region at the same period. The grass plots in the various gardens at and near Stavanger were as green as in summer: daisies, snowdrops, pansies, violets, and primroses had their blossoms well set; peonies had appeared above the ground, and many roses had thrown out vigorous shoots. The thermometer fell only once in January to freezing point.

MM. MIGNON AND TOUARD, who established the refrigerating service at the Paris morgue, have made experiments with their system on hams infected by trichinæ, and are stated to have proved that these are rendered wholly innocuous by exposure during an hour to a cold of -20° C. It will be proposed for the protection of consumers from trichinosis to render exposure obligatory in the case of importations from America or Germany.

THE great work of lighting the Paris Opera by incandescent light has already begun. The whole house will require 6000 lamps; at present 400 lamps are used.

THE additions to the Zoological Society's Gardens during the past week include a Pig-tailed Monkey (*Macacus nemestrinus* ♀) from Java, presented by Dr. Benthall; a Weeper Capuchin (*Cebus capucinus* ♀) from Brazil, presented by Miss Vincent; a Short-eared Owl (*Asio brachyotus*), British, presented by Mr. Oscar Burrows; a Smooth Snake (*Coronella levis*), a Common Viper (*Vipera berus*), a Common Snake (*Tropidonotus natrix*), a Slow-worm (*Anguis fragilis*) from Hampshire, presented by Mr. W. H. B. Pain; an Alligator (*Alligator mississippiensis*) from the Mississippi; a Horrid Rattlesnake (*Crotalus horridus*) from Florida, presented by Mr. A. Begg; a Philantomba Antelope (*Cephalophus maxwelli*) from South Africa, deposited; a Moose (*Alces machilis*) from North America, two Mute Swans (*Cygnus olor*), European, a Common Viper (*Vipera berus*), British, purchased; six Long-fronted Gerbilles (*Gerbillus longifrons*), born in the Gardens.

GEOGRAPHICAL NOTES

WE much regret to learn of the death, at Loanda, on March 17, of Dr. Paul Pogge, the successful African explorer. Dr. Pogge, since 1880, was the companion of Lieut. Wissmann in the exploration of the region inland from the Portuguese possessions,

and around the kingdom of Muatà Janvo. He accompanied Wissmann as far as Nyangwé in the journey of the latter across Africa, and in May 1882 set out to return to the station at Mukenge. Doubtless the hardships to which he has been subject, combined with fever, have told on Dr. Pogge's health. In 1874 he was a member of the German African Expedition which was sent out to explore the same region, and with only native companions succeeded in penetrating as far as the capital of Muatà Janvo.

THE announcement that Mr. Stanley intends to proceed from the Middle Congo north-east to the Mombutu country, partly, no doubt, to settle the question of the course of the Aruwimi, the great north-east tributary of the Congo, renders Dr. Junker's discoveries in the Wellé region of special interest. In the map sent home and published in the new number of *Petermann's Mittheilungen* we find in the northern part the Wellé, after receiving the Gádä, proceeding west-north-west, and on the north it is joined by the Mbrúôle, and not much further westwards by the Gúrba—both considerable rivers rising in the southern A'-Sandeh kingdom. After taking up the waters of the Gúrba, the Wellé curves sharply round, at first southwards, making many windings in its course, and describing a large semicircle round the land of A-Madi, a semicircle variegated by a series of islands. Later on it resumes its west and west-north-west direction. With the exception of the two larger tributaries from the north just mentioned, the Wellé along the whole extent of the sketch receives no considerable waters either from north or south. As far as the southern territory is concerned, this fact is explained by the circumstance that the most important tributary of the Wellé-Makua, the Bomokándi or Májo (Nemajo of Schweinfurth) flows in an extremely long course from east to west and north-west, approximately parallel to the Wellé Hut, an interval of hardly two days' journey. Further to the west, however, it discharges into the Wellé River. The Bomokándi, showing almost half the breadth of the Wellé, rises far in the east, and may also have its source in the mountainous country bordering the Albert Nyanza in the west. In consequence of this approach to each other of the two streams, no other tributaries are developed in the long tongue-shaped peninsula formed by the junction of the Wellé and Bomokándi. Except innumerable little rivulets, few rivers of any size run either northwards to the Wellé or southwards to the Bomokándi from the plateau of this peninsula. It is otherwise, however, with the rivers discharging into the Bomokándi from the south. The watershed whence flow its southern tributaries lying considerably further to the south, there is ample scope here for the formation of larger accessory streams. Proceeding from west to east, we come upon three rivers of almost equal rank with the Mbrúôle and the Gúrba—the Makongo, Pokko, and Telli. A river no longer paying tribute to the Bomokándi, but discharging further to the west directly into the Wellé, is, according to information, the Mbe'lima, the source of which is not far from that of the Makongo to the east. With these partly indirect tributaries to the Wellé through the medium of the Bomokándi and the direct tributary, the Mbe'lima, the river-system of the Wellé to the south comes to an end. Further south, and flowing from east to west, is the Náwa, belonging, according to information received, to a more southern river-system, forming indeed a northern tributary to the Népoko. Dr. Junker made his way south to the Népoko, four days' journey from the Bomokándi, and reached it in the middle of its course, where it holds the same longitude with the Bomokándi. He evidently travelled a long way from the region in which lie the sources of the Népoko, the Bomokándi, and the Kibuli, that is, the Kibbi (Wellé)—rivers which collectively descend from the mountain and table-lands west of Albert Nyanza; the water-parting must be sought in a line running approximately from south-south-west to north-north-east. That the Népoko, from the point at which he met it, and where probably it describes a northern curve, bends in its further course in an approximately south-west direction, may be inferred from the fact that though indeed known in the western territories, it is yet transferred far to the south beyond the Náwa, which rises in the west, not far from his line of route to the Népoko. In the region between Bomokándi and Népoko traversed by Dr. Junker, the watershed of the two river-systems is hardly perceptible, yet the country of the Népoko tributaries from the north is highly characteristic. Instead of the high trees which everywhere else clothe the banks of the streams, you here meet broad, flat, treeless swamps. A floating vegetation, very like the Ssett in the Nile, forms a bridge by which to cross these swamps,